

# PATENT COOPERATION TREATY

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From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

To:  
MODIANO & ASSOCIATI  
Attn. Modiano, Guido  
Via Meravigli, 16  
I-20123 Milano  
ITALY

(PCT Rule 44.1)

Applicant's or agent's file reference 38604/GM/pal	Date of mailing (day/month/year) 06/10/2004
International application No. PCT/EP2004/006690	international filing date (day/month/year) 21/06/2004
Applicant LUCINI, Oscar	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  
☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**


Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the international Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Maria Howarth
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>38604/GM/pal</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, Item 5 below.	
International application No. <b>PCT/EP2004/006690</b>	International filing date (day/month/year) <b>21/06/2004</b>	(Earliest) Priority Date (day/month/year) <b>04/11/2003</b>
Applicant  <b>LUCINI, Oscar</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**BINDING RESIN, PARTICULARLY FOR BUILDING AND TRANSPORTATION, METHOD FOR PREPARING THE SAME, AND ARTICLES OBTAINABLE WITH THE RESIN**

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/006690

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08G77/02 C04B28/22 C04B38/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08G C04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 198 51 290 A (ZENI VITTORIO ; CUMER SERGIO (IT)) 12 May 1999 (1999-05-12) page 2, column 3 - page 2, column 50; claims; examples 1,2	1-40
X	US 4 824 807 A (BLOUNT DAVID H) 25 April 1989 (1989-04-25) example 8(n); example 13 (a),(b); example 16(c),(d),(p) column 7, line 1 - column 7, line 41; claims	1-40
X	DE 296 16 052 U (KRAFFT ALFRED PETER) 2 January 1997 (1997-01-02) page 3, line 5 - page 3, line 25 page 5, line 25 - page 18, line 9 page 28, line 8 - page 35, line 15; claims; tables 1,2	1-40

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&amp;\* document member of the same patent family

Date of the actual completion of the international search

30 September 2004

Date of mailing of the international search report

06/10/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Kolitz, R

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/006690

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
DE 19851290	A	12-05-1999	IT	VR970105 A1	06-05-1999
			DE	19851290 A1	12-05-1999
US 4824807	A	25-04-1989	US	4908339 A	13-03-1990
			US	4945074 A	31-07-1990
DE 29616052	U	02-01-1997	DE	19600977 A1	17-07-1997
			DE	29616052 U1	02-01-1997
			AT	194000 T	15-07-2000
			AU	2149097 A	01-08-1997
			WO	9725291 A2	17-07-1997
			DE	19780011 D2	28-01-1999
			DE	59701911 D1	27-07-2000
			EP	0873283 A2	28-10-1998
			JP	2000502984 T	14-03-2000

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2004/006690

International filing date (day/month/year)  
21.06.2004

Priority date (day/month/year)  
04.11.2003

International Patent Classification (IPC) or both national classification and IPC  
C08G77/02, C04B28/22, C04B38/08

Applicant  
LUCINI, Oscar

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Kolitz, R

Telephone No. +49 89 2399-8481



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/006690

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/006690

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	2-4,6,12-20,22-25,29-35
	No: Claims	1,5,7-11,21,26-28,36-40
Inventive step (IS)	Yes: Claims	
	No: Claims	2-4,6,12-20,22-25,29-35
Industrial applicability (IA)	Yes: Claims	1-40
	No: Claims	

2. Citations and explanations

**see separate sheet**

Re item V:

Reasoned statement with regard to novelty and inventive step and industrial applicability, Article 33 (2) to (4) PCT:

D1: DE19851290 A

1.1. The present application (claims 1,5,7-11) relates to a composition named "binding resin" comprising

(A) a powder that comprises silica and one or more hardening agents (silica powder mixed advantageously with esters of polyhydroxy alcohols and alkylene carbonate esters, see description page 7, lines 19-25, sold under the trade name Duplas by F.lli Mazzon S.p.A. Schio (Vicenza), see description page 15, lines 4-6)

(B) a solution of at least one silicate of an alkaline metal (sodium or potassium, advantageously having a weight ratio between  $\text{SiO}_2$  and  $\text{Na}_2\text{O}$  comprised between 1.5:1 and 4.0:1 or a weight ratio between  $\text{SiO}_2$  and  $\text{K}_2\text{O}$  comprised between 1.5:1 and 4.0:1)

Dependent claims 2-4,6,12-20 relate to the same composition comprising further components.

1.2. The present application (claims 21,26-28) relates to a method for producing the "binding resin" by mixing a powder that comprises silica and one or more hardening agents with (B) and claims 22-25,29-35 relate further to the same method including further components.

1.3. The present application (claims 36-38) relates to a product manufactured starting from above mentioned "binding resin" and claims 39-40 relate to its use.

2. The subject-matter of claims 1,5,7-11, 21,26-28, 36-38 and 39-40 is not novel in the sense of Art. 33 (2) PCT:

2.1. D1, examples 1 and 2 discloses a composition for the manufacture of light weight flameproof articles for the building and transportation sector made by mixing a hardener powder (A), which is a silica powder that comprises silica and 0.1-10 % of a hardening agents (esters of polyhydroxy alcohols and alkylene carbonate



esters), the powder being sold under the tradename "Dusthart" of F.Ili Mazzon Prodotti Chimici Srl Schio, Vicenza, see D1, page 2, 26-29 and 40-46, with

(B) a solution of at least one silicate of an alkaline metal (sodium or potassium, having a weight ratio between SiO<sub>2</sub> and Na<sub>2</sub>O comprised between 1.5:1 and 4.0:1 (IDRES1 tradename of F.Ili Mazzon see above) or a weight ratio between SiO<sub>2</sub> and K<sub>2</sub>O comprised between 1.5:1 and 4.0:1 (IDRES2 of F.Ili Mazzon)), see D1 page 2, lines 26-39, such that all the features of present "binder" claims 1,5,7-11 and method claims 21,26-28, "product" claims 36-38 and "use" claims 39-40 are met.

Therefore the subject-matter of present claims 1,5,7-11, 21,26-28, 36-38 and 39-40 is not novel vis-à-vis D1.

3. As to the presence of an inventive step in the sense of Art. 33 (3) PCT of the subject-matter of claims 2-4,6,12-20,22-25 and 29-35 :

The composition of A and B disclosed in D1 further comprises optional components such as vermiculite, perlite and foamed clay, see D1 examples 1 and 2 or other extenders such as ash, see D1 page 2, lines 47-50.

Therefore the features of claims 2-4,6,12-20,22-25 and 29-35 appear at first glance to be obvious. It is not apparent from the the present description what problem is solved by their distinguishing features in view of the prior art. The subject-matter of claims 2-4,6,12-20,22-25 and 29-35 is therefore not inventive in the sense of Art. 33(3)PCT.

4. The subject-matter of claims 1-40 appears to be industrially applicable in the sense of Article 33(4) PCT.